SCORES ON ICE

The COVID-19 pandemic has created a deep rift between what recent economic developments suggest versus what risk managers are seeing in customer risk data. Despite a significant deterioration in the economic environment, the latest credit risk data does not show any material worsening in customer risk scores. Many customers are in receipt of payment holidays, but there is great uncertainty about the ultimate outcomes for these customers.

In the absence of outcome data, traditional scoring approaches cannot be deployed, making risk assessments and helping customers choose their path, somewhat difficult. To support banks in tackling this issue, 4most has developed an algorithm to give an accurate credit risk assessment, factoring in the impacts of COVID-19.

Economic conditions

The consensus economic forecast points to a 16.4% fall in GDP in Q2 and 8.6% in 2020 as a whole. Unemployment is expected to rise to 7.7% by the end of the year. The government has provided unprecedented support to businesses and their employees, but the dent to the economy is already apparent in the jump in unemployment from 3.4% in February to 5.8% in April of this year. There are hopes for a sharp recovery once lockdown restrictions are lifted, however, the hit to business and consumer confidence has been enormous and the momentum of this hit is expected to play out for months to come. There are also big uncertainties regarding potential future lockdowns and UK's exit from the EU.

Customer credit risk scores

Despite this economic backdrop, there does not appear to be a material worsening in customer risk scores according to the latest monitoring data, with some customers showing improvement as their credit balances drop due to reduced spending. UK banks are extending payment holidays and UK regulators have ruled that these holidays should not be seen as an indicator of credit impairment, unless they are considered to be of permanent nature. What is normally a predictive driver of risk cannot be used as such in the current circumstances.

In effect, customer credit scores have currently been put on ice. However, in a few months' time when payment holidays end, credit risk managers are expected to be faced with a sharp deterioration in credit impairment, which will need to be managed appropriately. It is incumbent upon lenders to recognise a threshold has been crossed that points to a significant increase in credit risk or credit impairment. How can such an assessment be made?

A new framework for risk assessment

In such an unprecedented situation, traditional credit scoring models lose a lot of their predictive power. The models will not show material discrimination for customers who have been given a payment holiday, regardless of whether they are on furlough or unemployed, or the sector of the economy they are employed in.

In a letter published last week, the PRA recommended a holistic approach to credit risk assessment in the current COVID-19 environment, which is based on:

- consideration of economic conditions
- use of historical information that firms already hold about borrowers

- information gathered from customers using payment deferrals and
- application of expert judgment.

An approach to help you segment customers in a COVID-19 environment

4most has developed an approach that can be used to segment customers based on risk factors relevant to the ongoing COVID-19 situation. It aligns with the PRA holistic assessment framework, whilst automating decisions through our **Knowledge Elicitation Process (KEP)** algorithm.

There is uncertainty in how customers in receipt of payment holidays will ultimately resolve. At this point there is no outcome data, therefore traditional scoring approaches cannot be deployed. The alternative, to use experts to perform manual assessments, can be useful but operationally there may not be sufficient capacity to perform a large number of reviews and the process will be too slow.

4most's KEP is a modelled solution that takes the learning from the experts and replicates their thinking and approach in a structured way. This delivers a more accurate and consistent set of results, rather than relying on the experts written logic alone. The process is nimble to build as it requires a low number of customer observations but still achieves excellent risk discrimination.

Our approach requires the use of data relevant to the COVID-19 environment, including existing customer data, data obtainable from the Credit Reference Agencies or data specifically requested from customers in order to better understand their circumstances. Examples include:

- current account transactional data showing credits from the government's furlough scheme or universal credit scheme;
- current account data from which disposable income can be inferred
- Credit Reference Agency income, exposure and utilisation related data
- sector of employment
- proximity to probability of default threshold
- employment status obtained from the customer.

Our algorithm

The KEP approach is based on pairwise comparisons of customer accounts, each of which is presented with data fields as per the examples above. Using our KEP Tool to facilitate the process, experts rank the accounts depending on the perceived level of risk. Based on these rankings, the algorithm finds the relative weight of each data field which then becomes a factor in the KEP COVID-19 tailored scorecard.

KEP is a structured process, enabling statistically robust scorecards to be built in a nimble way.

4most workshop with business experts, using our elicitation tool to compare pairs of applications. This will extract variable weights to reflect the experts' view of risk.

The output from this process is a statistical model, which will allow us to calculate a probability of 'expert accept'. This will be used to inform the inference process.

This process supports knowledge building and buy-in from the business and underwriter team. It also ensures underwriter expertise is incorporated in the scorecard development process.

Drawing the strings together

Ideally there are numerous considerations to be made in understanding customers' circumstances to drive credit risk analysis. In the current COVID-19 reality, only few of them will be known or identified, and there is limited capacity and time to evaluate and make an informed recommendation. Our approach, as demonstrated in the table below, addresses these constraints and helps you to bring the critical elements to the fore, and to expedite a voluminous task with due care for how this impacts each individual customer. It is a framework and approach that can be scaled and replicated and will withstand the many months of further review and working with your customers.

Economics	History	Status	KEP	Treatment encouraged	Provision /ECJ
PD shift but not near threshold	Good	Effects abated or trending	Very low risk	Self-cure Repay Digital route	Only economic impacts
PD shift but not near threshold	Good	Temporary effects but positive signs	Low risk	Full/partial Digital Inbound Update	Some stage migration but mostly economic
Possibly PD shift toward threshold	Some concerns	Temporary effects remain	Moderate risk	Partial-extend Outbound Update	Stage 2 migration, real economic impacts
Expect high PD shift or already high PD	Concerns	Effects lasting	High risk	Extend Outbound Update	ECJ for sector; Shift sector to S2
Expect high PD shift or already high PD	Numerous concerns	Certain negative impacts	Very high risk	Outbound Update	ECJ for sector; consider S3

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